

## WHAT IS CLAIMED IS:

1. An electronic device storing and protecting in a case member an insulating substrate and an electronic substrate having an electronic circuit composed of mounted parts such as conductors, resistors, and capacitors formed in a film form on said insulating substrate, wherein:

said film-form conductors formed on said surface of said insulating substrate excluding a probing portion for electrically connecting with said conductors in a manufacturing process of said electronic device and a mounting portion which is connections of said conductors with said mounted parts are overcoated with glass or resin, and openings of said probing portion and said mounting portion which are not overcoated are all formed in a shape having no corners at  $90^\circ$  or less, for example, in a circular shape, in an elliptical shape, or in a shape that corners of a tetragon are rounded (R, circular arc) or chamfered (C, tapered), and said openings surrounded by said overcoating materials are covered with solder or metallic paste.

2. An electronic device storing and protecting in a case member an insulating substrate and an electronic substrate having an electronic circuit composed of mounted parts such as conductors, resistors, and capacitors formed in a film form on said insulating substrate, wherein:

said film-form conductors formed on said surface of said insulating substrate are mostly overcoated with an overcoat material of glass or resin, and the remainder is overcoated with a conductive member such as solder or metallic paste, and

the surface of said overcoated part by solder or metallic paste is formed in a shape having no corners at  $90^\circ$  or less, for example, in a circular shape, in an elliptical shape, or in a shape that corners of a tetragon are rounded (R, circular arc) or chamfered (C, tapered).

3. An electronic device according to Claim 1, wherein the shape of said overcoated part by solder or metallic paste is a tetragon having a ratio of the short side to the long side within the range from 0.5 to 1.5 or an ellipse.

4. An electronic device according to Claim 1, wherein the shape of said overcoated part by solder or metallic paste is a tetragon that said corners are rounded at R or C of  $1/10$  of the long side or more.

5. An electronic device according to Claim 1, wherein the shape of said overcoated part by solder or metallic paste is a tetragon that said corners are rounded at R or C between 0.1 and 0.5.

6. An electronic device storing and protecting in a case member an insulating substrate and an electronic substrate having an electronic circuit composed of mounted parts such as conductors, resistors, and capacitors formed in a film form on said insulating substrate, wherein:

said film-form conductors formed on said surface of said insulating substrate excluding a probing portion for electrically connecting with said conductors in a manufacturing process of said electronic device and a mounting portion which is connections of said conductors with said mounted parts are overcoated with glass or resin and said probing portion or said mounting portion is subject to a

conductor pattern that said portion is formed in a position branched from a conductor line where the function of said electronic circuit is not damaged even if said portion is disconnected or said conductors are formed in parallel.

7. An electronic device according to Claim 6, wherein as means for forming said conductors in parallel, said conductors are formed in a multilayer on said substrate, and said probing portion or said mounting portion is formed in the uppermost layer, and said conductors in the lower layers are arranged in parallel with said portion.

8. An electronic device according to Claim 6, wherein:

said film-form conductors formed on said surface of said insulating substrate excluding a probing portion for electrically connecting with said conductors in a manufacturing process of said electronic device and a mounting portion which is connections of said conductors with said mounted parts are overcoated with glass or resin and in said probing portion or said mounting portion, the conductor width is wider than that of the other parts and the width of unovercoated opening faces is  $\frac{2}{3}$  of said conductor width or less.

9. An electronic device according to Claim 1, wherein said case member is a joint of a member having a conductive terminal for electrically connecting said electronic substrate positioned in said case to an outside of said case and a member such as a cover, and said joint is formed via an adhesive, fusing, or sealing material, thus an airtight case member is obtained.

10. An electronic device according to Claim 1, wherein

said conductors are composed of a main component of silver or copper.

11. An electronic device according to Claim 1, wherein said insulating substrate is made of ceramics, and said conductors and said resistors are formed by thick film printing, and said coating is formed by thick film printing of glass, and said probing portion and said mounting portion are printed with solder, and after loading said mounting parts, said solder is heated and fused, that is, so-called reflowed.

12. An electronic device according to Claim 11, wherein the print film thickness of said solder is 5 times or more of said overcoated glass film thickness.

13. An electronic device according to Claim 11, wherein the print film thickness of said solder is 5 times or more of said print film thickness of said conductors.

14. An electronic device according to Claim 11, wherein said solder is composed of a main component of lead or tin.

15. An electronic device according to Claim 1, wherein said device is a thermal type air flow measuring instrument.

16. An electronic device according to Claim 15, wherein said thermal type air flow measuring instrument measures a flow rate of intake air into a car engine and is attached to an intake air passage.

17. An electronic device according to Claim 15, wherein whole or part of said case member for storing and protecting said electronic substrate is positioned in a flow path of a fluid to be measured.